

## HYDRO GEO CHEM, INC.

Groundwater Consultants

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16 March 1982

Mr. Les Taylor Nordhaus, Halton, and Taylor 200 Lomas Blvd. NW Suite 810 Albuquerque, New Mexico 87102 Confidential Claim Retracted

Authorized by:

Date: <u>4/35/13</u>

Dear Les,

We want to thank you for your thoughtful review of our final draft of "Effects of Uranium Mine Dewatering on the Water Resources of the Pueblo of Laguna, New Mexico." Harold has informed me that you had questions about the changes in impacts due to nonlinear boundary conditions in some of the simulation scenarios. Although we have discussed these changes in the final version of the report (which you have not seen), I would like to discuss them briefly here.

In the original version of the final report, the combined effects of the various mines close to the Pueblo were estimated by superimposing their individual simulated drawdowns. This is normally a standard hydrologic technique. In this case, however, the combined drawdowns resulted in springs drying up on the boundary of the model. This resulted in a change in boundary conditions in the model which bothered us. We then ran simulations which explicitly involved several mines. These simulations revealed that the drying up of the springs resulted in a no-flow boundary condition in some parts of the Pueblo and that this change caused substantially greater drawdowns. The results of these combined simulations have been included in the final report and the reasons for the increased drawdowns are discussed.

If we can answer any further questions for you, please feel free to contact us. We have enjoyed working with you and the Laguna Pueblo. Perhaps, in the future, we can again be of service to you.

Yours truly,

Gary R/Walter Hydrogeologist

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